

**ECONOMICS AND INDUSTRY  
STANDING COMMITTEE**

**INQUIRY INTO TECHNOLOGICAL AND SERVICE INNOVATION  
IN WESTERN AUSTRALIA**

**TRANSCRIPT OF EVIDENCE  
TAKEN AT PERTH  
WEDNESDAY, 17 FEBRUARY 2016**

**SESSION TWO**

**Members**

**Mr I.C. Blayney (Chair)  
Mr F.M. Logan (Deputy Chair)  
Mr P.C. Tinley  
Mr J. Norberger  
Mr T.K. Waldron**

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**Hearing commenced at 10.23 am**

**Mr LINDSAY O’SULLIVAN**

**Chief Operating Officer, Chamber of Commerce and Industry of Western Australia, examined:**

**Mr DALE LEGGETT**

**Director of Policy, Chamber of Commerce and Industry of Western Australia, examined:**

**Mr LUKE HOARE**

**Principal Policy Adviser, Chamber of Commerce and Industry of Western Australia, examined:**

**The CHAIR:** On behalf of the Economics and Industry Standing Committee, I would like to thank you for your appearance before us here today. This hearing is being convened to enable the committee to gather evidence for its inquiry into technological and service innovation in Western Australia. You have been provided with a copy of the committee’s terms of reference. At this stage, I would like to introduce myself and the other members of the committee here today. I am the chairman, Ian Blayney, the member for Geraldton. With me is the deputy chair, Fran Logan, the member for Cockburn, and our other committee member here today is Terry Waldron, the member for Wagin. The Economics and Industry Standing Committee is a committee of the Legislative Assembly of the Parliament of Western Australia. This hearing is a formal procedure of the Parliament and therefore commands the same respect given to proceedings in the house itself. Even though the committee is not asking witnesses to provide evidence on oath or affirmation, it is important that you understand that any deliberate misleading of the committee may be regarded as a contempt of Parliament. This is a public hearing and Hansard is making a transcript of the proceedings for the public record. If you refer to any documents during your evidence, it would assist Hansard if you would provide the full title for the record.

Before we proceed to the inquiry-specific questions we have for you today, I need to ask you the following: have you completed the “Details of Witness” form?

**The Witnesses:** Yes.

**The CHAIR:** Do you understand the notes at the bottom of the form about giving evidence to a parliamentary committee?

**The Witnesses:** Yes.

**The CHAIR:** Did you receive and read the information for witnesses briefing sheet provided with the “Details of Witness” form?

**The Witnesses:** Yes.

**The CHAIR:** Do you have any questions in relation to being a witness at today’s hearing?

**The Witnesses:** No.

**The CHAIR:** We have some questions to ask you, but, before we get to them, would you like to make an opening statement?

**Mr O’Sullivan:** I will try not to bore you for too long, but I have a few comments to make. First of all, thanks very much for the opportunity to make a submission and appear before you; it is a real privilege to do that.

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Your first question might be why CCI is here and why we have an interest. Chambers of commerce have been around for a very long time. We have been around for 125 years. We have not always been as innovative as we could ourselves, but we are on that journey around becoming a more innovative business and supporting our members to do so as well. We are the peak industry body representing all industries and all size of business across the state, metro and regional, and we have the scale to try and do something about supporting businesses through their innovation journeys. We see our role as a connector between big business, small business and universities, who sometimes have trouble engaging with industry, and governments.

There are three pillars to our agenda that we are working on at the moment. The first one is thought leadership. A lot of great innovation is already happening, and that story has to be told. But also there is a lot of information that is not really well understood. So we are doing some work on things like understanding and documenting what the innovation ecosystem is in WA, which is basically what mechanisms are in place to support businesses, and we think there is a real gap there. The second is around facilitation. So that is bringing people together to talk about what is going on and trying to make those connections where they may be coming from very different worlds—so academics are very different to a small businesses entrepreneur. The third is building capacity. We think there are very specific skills that need to be built. There are a couple of things we are doing. One is around how do we help businesses be able to attract investment, which is a critical necessity if you are looking to innovate and grow, but it is a skill that is not necessarily well understood by a lot of businesses. We are also working on how to connect students with businesses through structured work-integrated learning programs.

We want to make three main points, just to preface the conversation. One is innovation is already happening in Western Australia and has been for a very long time—since the founding of the colony. It is not a new phenomenon. There are a lot of reasons why innovation happens. One is economic need. If you have got bills to pay, shareholders to please and customers to respond to, then you have to be looking at launching your products, doing things differently, and lowering your costs. Globalisation of technology is a hugely disruptive force and not really well understood by many in the community; opportunism, so just entrepreneurs seeing a good idea and looking to leverage it and create wealth for themselves or their communities; and generational change is also driving a lot of innovation in Western Australia. We have got a couple of generations now that are much more familiar with technology and much more globally minded than previously, and that is driving a lot of innovation as well.

The second point we think is really important is innovation is not limited to start-ups. It is really important that we do not focus just on what we call, or what I call, colloquially the cool kids in the playground, which are the start-ups—really attractive to do so. We need to make sure that we are creating an environment where more people are willing to take a chance and look at something very, very new in terms of start-up, and they will generate jobs over the long term—significant jobs. But you cannot ignore, in terms of policy, existing employers. We do so at our peril, because they employ the majority of people in the community and if they do not respond to external market forces through innovation, jobs will be lost. So it is really important that we focus our innovation agenda on both start-ups and existing mature businesses.

[10.30 am]

The second point is that government plays a critical role, we believe. There are plenty of case studies to show that government investing lots of money can have a significant return. Countries like Israel are used as the poster children of programs. But where we have an environment where we do not have the fiscal flexibility to throw lots of money at it, there is still a role governments can play. One is around taxation. There is a very strong link. I am not an economist but these guys can talk more eloquently to it. There is a very strong link between adjustments in taxation and investment in R&D and investment in taking risks and starting

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businesses or doing some new things, and it is a very powerful driver of that entrepreneurial risk-taking which we think is at the heart of innovation.

So what can governments do in a Western Australian context, particularly where you do not have a lot of tax levers you can pull, because it is primarily a federal government responsibility? One is around the signals that get sent to market. So it is avoiding the temptation of trying to do everything, but instead sending signals to the market that this is a great innovative place to come and do businesses and have new ideas. One of them is around coordinated economic development strategy and policy. Economic development is spread across many parts of government and that can at times mean that it is watered down and we do have a clear idea where the economic development of the state is coming from. That is as much around focus and concentrating funds and resources as it is about spending lots more money.

The second is where the state chooses to spend its limited funds. Some of those areas are things such as training. If you are looking to try and create a much more innovative community and business sector, then giving people the skills and making sure that funds are directed at trying to focus on particular skills—particularly skill sets, not just qualifications. We think that is a really useful way for government of using its limited funds. That is in areas such as—to give a couple of small examples—data analytics and data science. That is not just limited to big global initiatives like the Square Kilometre Array. Most businesses are flooded with data every day and they have limited ability and skills to do a lot with it, and that can actually drive significant innovation.

We can look at other things, such as where we invest funds in things like infrastructure—social infrastructure, or harder infrastructure as well. One is what the state can do to help attract capital. I think programs that attract innovators and investors to our market are really useful initiatives, as long as it is done in partnership with the private sector. That can be things such as what access to data the state provides the market, or streamlined approvals so that it makes it easy for people starting up or coming here and looking to make investments.

The third is the government is a big player in the market from a procurement point of view. It procures a significant amount of economic activity. So it is policies around how it directs that to try and focus it on Western Australian businesses, but also on maybe more innovative ones, not just the players that have always been there and have always delivered services.

The second major area other than sending the signals is removal of barriers. We have done a lot of work with our members. Most recently we have done some surveying with our members. Big businesses consider themselves quite innovative; small and medium businesses less so. Primarily the barriers they talk about are they are really, really busy, having to juggle lots of things, and the areas that do not generate any economic value for them and for their customers and for the people they employ is balancing and managing all the regulatory burden. So any initiative that allows for a lowering of that burden, whether it be the volume of regulation, and where there is a lot of regulation in Western Australia across multiple layers of government, or changes in regulation, which is as much a destructive force as just the sheer volume of regulation. It will remove a major barrier to businesses, having some time to focus on taking some risks, which is what is often involved when you innovate.

I think also deliberate programs of removal of duplicative regulation is important. But, more importantly, it is monitoring how regulation is being applied by government agencies. You need regulation to make sure that you have a well-functioning system. But if you have inconsistency in the way that regulation is being applied, or there is a cultural focus on acting as the role of policeman rather than monitoring and supporting, you make it a lot harder for businesses to be able to operate within the regulatory environment that we have. That is often driven by leadership shown by government, and also by leaders within the agencies themselves in driving that cultural mindset. I will leave those comments there and we are really happy to answer some questions.

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**The CHAIR:** Before we opened I should have declared an interest, because I am a member of the Mid West Chamber of Commerce and Industry and, therefore, ex officio or whatever, a member of yours, because of that.

**Mr F.M. LOGAN:** Thanks very much indeed, Lindsay, for that presentation. I have heard the Chamber of Commerce and Industry sing the same old song about the removal of regulation over and over again, but I must admit that you have struck a very, very novel point in terms of removal of regulation. I have never heard somebody link it to innovation. That is innovative—that somehow, the removal of regulation is going to free up time for small to medium enterprises to concentrate on innovation. That is a first. You know, I know, and everyone else knows, who has anything to do with business, that we have a cultural problem—you say so yourself in your submission—in terms of small to medium enterprises in Western Australia and their approach to innovation. As we have seen from our own visits to business, here and in the other states, and also what we have heard from submissions and from businesses on the shop floor, there is a significant reticence by small to medium enterprises to get involved in the whole process of innovation, or to even investigate linkages with universities, training facilities, or anything. That is a real problem. You can give people more time, but there is no guarantee that they are going to be innovative; they might watch TV for longer. What is the CCI's view about overcoming the cultural issue within the small and medium enterprise sector in Western Australia with thinking about innovation, and taking the first steps to actually getting more information about innovation, and overcoming the fear of actually asking for help from either the CCI itself or higher centres of learning?

**Mr O'Sullivan:** I think it is an interesting conundrum. The first point I would make is that there is no silver bullet, so there is no one thing that you can do. The second is to understand that what businesses are managing, and small business owners or managers of slightly larger businesses, is the huge volume of things they are having to look after in keeping the business operating every single day. I cannot talk for every business and what they are doing, but I can tell you what our members are telling us. Our members are telling us that their primary focus is on being able to deliver for their customers, which I think is the right focus. And then what they tell us is—I would not necessarily agree that the majority of small businesses have no interest in investigating how they can be more innovative. They are innovating all the time, so it depends on how you define it.

What I will say is that most businesses in all things that they have to juggle are relatively unsophisticated. What can we do about it? In our agenda we are talking about, first of all, that thought leadership; so educating and providing more information, but make that information easier to digest. Google is a fantastic innovation over the last 10 or 15 years, but one of the problems of things like the internet is the sheer volume of information and your ability to be able to decipher and derive insights from it. One of the things that we think we and others can do is try to provide some way of cutting through that volume of information and providing some insights about where the opportunities might exist. The second is around skills; you do not start up a business or run a business with all the skills necessary to be the most innovative player in the market, and not everyone can be the most innovative player in the market; there is always going to be some that are more innovative than others, but I think if we can help provide some additional skills, whether that be through the provision of information or training or other things, then that is one of the ways that we can help them, and it is in things like technology or data management, or how you use software differently, so that there are more ways we can help with skills.

[10.40 am]

On the last point you made about connection to the universities, universities are very large organisations. They are highly bureaucratic and structured in silos, and that is how universities are created all over the world. It is incredibly difficult for a business even to know where to start. Universities tell us this themselves. Even if they make contact with universities, how do they know they are with the right place? If they talk to somebody, that person does not necessarily know where

to go in the university. One of the things that we think we can try and play a role in is working with universities and working with businesses and acting as a conduit to try to make those connections. There are a couple of things we are doing to do that specifically. One is that we have some programs that are outlined in our submission around running small events between—the University of Western Australia and ourselves bringing university academics or visiting academics and businesses around the table to just talk about issues, so that we can start to build those connections, the personal connections as well as the institutional ones. The other is, we have been for a long time and continue to have business analysts, or analysts and consultants as part of the federal government entrepreneurship program, so we use that as a way of trying to connect universities and research with businesses, and vice versa.

**Mr T.K. WALDRON:** Thanks very much for your opening comments; I actually found them really good, especially about being connectors and facilitating in what you guys are doing. I think it is good. I am always interested in what we can actually do as a government to try and help in this area. One of the things you said first off was that we need to send signals to the market. Are you talking there a bit like our Prime Minister, who came out and talked about innovation, and everyone sort of jumped? Is that the kind of stuff you are talking about? Just to add to that, you talked in your submission about Germany's *mittelstand*. I would not mind you just expanding on that, talking about SMEs, and how maybe government could get what it is doing, and is there an area where we could make a recommendation to government about that?

**Mr O'Sullivan:** I will let Dale talk about some of those things. In terms of your first point, part of it is around the rhetoric, and it is about focus. We just came from a breakfast this morning with UWA and we had someone from Belgium who is visiting Australia, who runs a business called Inno.com, and has been for 18 years, and it connects research in universities with businesses. What he talked about really clearly is focus. If you are trying to do everything, and be all things to all people, you not only make it difficult to understand what government is trying to do and what it is telling us, and what are the opportunities, but also you need to spread resources. So the first one is around focus, so that even if the rhetoric is that this is really important to us and important to our community, and we are going to do things, some of those things might be relatively superficial, and you might have some of the things pulled apart and say, there is not enough money, or there is not enough to it, but if you have that rhetoric, then people start to pick up on it. We have seen a huge increase in people asking questions, attending events and being involved in things about innovation, just because we are talking about it now. So that is one of them, but that is not going to be enough, though. The rhetoric is not enough, and that ends up driving cynicism. There is plenty of that in the community, and the less of it, the better, but it is, what are the practical things that we can do that government has controls over? It might be around, how does it better engage with the private sector to deliver some of these things?

**Mr T.K. WALDRON:** Can you give me an example of that, if you can think of one now?

**Mr O'Sullivan:** One of them will be around are there some parts of government that the private sector could be better off delivering for the community, and that sends a signal. In doing that, you open up opportunities for entrepreneurship and innovation to come in and look at doing things differently, because in order to it, you need to deliver a better service, you need to commercialise it or you need to lower the cost of delivery. So that drives innovation. The other one is access to data, so government can send a signal to the market that we are an innovative community and we really embrace innovation and we will open up our books, if you like, and give people access to that data and see what they can use and what they can do with it.

**Mr Leggett:** I will just elaborate a little bit more. Coming back to your earlier comments, Fran, the one thing we find with red tape for some of our members is that it is an issue and it is a problem for them while they are experiencing them, and once they have actually found their way through that, it is no longer a problem; it is not at the forefront of their mind anymore. So it is trying to find a way

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that we can collaborate with all our members to ensure that what they are experiencing and feeling does not fall through the cracks and that we are able to better grab it and elaborate and let government know about the issues that do exist rather than not having a way to push that forward.

With regard to the mittelstand, I will let Luke talk about this to you. He has got quite a bit of experience on this.

**Mr Hoare:** The mittelstand, or middle ground in German, is a famous example of sort of global economics which has been very resilient to change. It has really been the backbone of the German economy for quite some time. There has been a lot of work done by various countries or provinces around the world to look at how success there can be replicated, if it can be replicated and that sort of thing. I think some of the reasons why it might be relevant here is because it does have certain correlations to the WA scenario. It has close interconnections to a strong manufacturing base, whereas here it might be more like a resource sciences base. There is a general capability for excellence, and the resources sector here has generated world-leading standards in resource, oil and gas, technical expertise and scientific concepts. I think one of the challenges here is that the mittelstand in Germany is supported by what is called the Fraunhofer society, which is this independent, non-government organisation which provides applied research to small and medium enterprises in that sector. That is not something that could be realistically replicated here, as it is a multibillion-dollar enterprise that operates more than 60 research centres around the country. The question that the committee might be interested to consider is whether something similar could be established on a much smaller scale. I think for the research to be practical and applicable to the market conditions here it would have to be a non-government organisation, but whether government could perhaps provide seed capital and regulatory parameters to help establish such a thing might be of interest. We have not really had the time to sort of do extensive research on it ourselves to know just how practical it would be, but it is an interesting idea.

**Mr F.M. LOGAN:** Luke, can I just raise that about the mittelstand phenomena and the German approach to innovation and development and quality, because, ultimately, what they are looking for is quality as a selling technique for their products? It is driven, as you know, very much from the ground up, from small and medium business enterprises that absolutely value training and they absolutely value the skills of those people who are involved in that training. You only have to ask any German company that operates here and they will tell you or any German tradesperson or manager and they will just repeat it over and again. I cannot see how that can be replicated here. I would like to see it replicated here; I just cannot see how, in the present environment, that can be replicated here, because not only do we not value training—if we are talking about the resources sector and applying it to the resources sector—whereas in Germany they are looking for meister craftsmen as being the technical leaders of their trades. In the resources sector here, they are looking at 457 imports from China and India because they are cheap. How the hell can we replicate that? We do not value training and the resource companies do not value highly qualified tradespeople. We know. Look at what is going on in the north west right now. People are getting laid off and other people are getting employed because they are cheaper and brought in from overseas. How can we replicate that? We have no culture or attitude that would replicate what Germany is doing here in Western Australia.

**Mr Hoare:** It is certainly the case that they do have a very strong emphasis on apprenticeships and training. I think they account for about 83 per cent, or something along those lines, of all German apprenticeships. I think here there is probably a difference between the very technical work that some of these companies might be doing in the mittelstand and some of the diversity of operations that are performed in the resources sector here. I think in the sections that deal more with the scientific innovation, there probably is that emphasis on training and excellence, and I think that might come through in our international standing in that regard. But I think if there is a feeling that there is not a culture of valuing training in that sector, maybe it is an opportunity to try to implement one through policy settings.

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[10.50 am]

**The CHAIR:** It is also very hard to say we can just adopt the German model. The other thing, of course, is they split their high school students at about year 10 level, I think it is, and some go off to the gymnasiums and others go off to the technical schools, and, of course, you go into a technical school and become a tradesman and, if you want to, you can end up with a PhD, whereas here, PhDs are over there in the academic stream and we never take in our industries at that point. That is just a comment.

You said you were in the process of mapping the ecosystem. Can you tell us a bit about that? I am interested in your time line. Presumably, you are going to produce some kind of document about this. Is it something that you can or would want any support from government for and are you aware of that having been done in other places—maybe Victoria?

**Mr O'Sullivan:** The genesis of this idea was about 18 months ago we started looking at what our strategic plan would be over the next few years. We identified that if we were going to continue to be relevant, we needed to start innovating and also that the Western Australian economy needed to continue to diversify and not be reliant only on large construction investment into the resources sector. In order to do that, you needed new innovative businesses and existing businesses to innovate more. Then we started thinking how does that happen. There is lots of talk about how you define innovation—just google it and come up with any definition you like. I think the trick is just to pick one and stick to that, and any innovation is going to be appropriate. We started talking to lots of different businesses. We started talking to advisers in lots of different sectors, we started talking to the cool kids, the Spacecubed and those kinds of players, and we talked to people in the government. What was really clear is that there is some work that has been done. StartupWA is a small organisation that has done some mapping of a start-up ecosystem. But we felt there was a big gap and we could not find anywhere in the world really that has done what we were thinking. We wanted to try to come up with a practical tool that said, depending on what your level of maturity is, whether you are a start-up or an idea through to a start-up to a small business through to a larger business—that is not necessarily a linear progression; some people stay as a small business and they are happy doing that, and other businesses grow into larger ones—“Do they have different needs?” Our hypothesis was they have different needs, but their needs are going to be similar across the innovation process—the innovation process being the ideation to the creation of the idea; the second is the development of that idea; and, really, most importantly, the commercialisation of the idea, which is actually the most critical part.

We said in order to have a healthy ecosystem you needed people playing in all three phases of that innovation pathway and you needed people who are supporting all sizes of business or maturity of business. So we said, “Why don't we go and map to see who is there playing in that space?” Effectively, it will be across those two dimensions—size of business and maturity of business—and where you are in the innovation lifecycle, so idea creation, development or commercialisation. We have done some desktop research just by talking to people and seeing what we can gather and have an initial set organisations that we see are playing in these different parts. Eventually, what we will have is a tool that, if you are a small business and you are saying, “I've got an idea; who can help me form that idea?”, here is who is in the market who can try to help you: “I have an idea. I know what I've got to do but I've got no idea. How do I go and build it? It's a piece of software. Who is out there who can help me work out how to code it? I've got my idea all ready to go; I've got to prototype it. I've got no idea how I'm going to make some money or where I'm going to take it. Who is going to help me attract an investor to help me take this thing international?” You will know who is currently playing it. That is one aspect of it—it is a tool. The other one is that it is a way of trying to think about policy, so are there gaps in that ecosystem that we can try to focus our attention on to build up that capacity within that ecosystem?

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Where we are at the moment is we have got a very rough first part and who is playing in it. We are looking to try to find a way of building that into a tool—a beta version, if you like—that can be at least moderately interactive, so you can zoom in and see who is currently playing in each part of that ecosystem, and look for a pathway where we can try to start to improve the information that is in there, because we are not seeing it is exhaustive. There will be people who say, “I play in that sector” which we have encapsulated, so it is a way of trying to research that over time. Ultimately, what we want to have is two things: a really live interactive tool that allows people to put in some requirements and it will bring up who can provide you with that support and ways of getting through to them; and a diagnostic, so by keying in some information, driven by some algorithms, it will help you understand where you are or where you should be in that ecosystem, because you may not know. You might say, “I’m ready to commercialise” and the diagnostic will say, “Hang on a sec; maybe you’re not. Maybe there’s some things you need to do before that.” That is an idea at the moment. It has not progressed beyond that idea.

**The CHAIR:** When will whatever you are working towards be ready?

**Mr O’Sullivan:** We are looking to have at least a prototype of that within the next three months that we can share with people and say “What do you think? Is it useful?” Because we do not know. At the end of the day, it is an innovative idea ourselves and we want to try and test it and say “Well, let’s validate it,” and then, based on what people tell us, we can start to develop it further. Is there a role in government in that? Ideally, we would love to be working with government around how we make sure that is a useful tool for the ecosystem as a whole.

**Mr T.K. WALDRON:** Do you see access to that?

**Mr O’Sullivan:** Yes, absolutely. What we will hopefully do is that tool will be available to anybody. There might be some other things we can do around the collection of data, which we can then look to make available at a cost to people looking to try to access that data. But, ultimately, the tool, initially, is something that should be available to the business community.

**Mr T.K. WALDRON:** Because you said at the start you guys wanted to be a connector and that is part of the way of doing that.

**Mr O’Sullivan:** Yes, this is part of doing it.

**Mr T.K. WALDRON:** Before I mentioned, in the previous session, about grower groups et cetera. It was interesting, the comments then, about connecting universities to grower groups. So, would that be a way for them to connect as well?

**Mr O’Sullivan:** Yes, absolutely. It might be that we have got an idea but we need to get some research done on it. Well, that might be a way of saying that not only universities but there are other research organisations that that might be available in.

**Mr T.K. WALDRON:** It might be that the Victorian government is doing something like that, mapping all the businesses.

**The CHAIR:** The university would turn around and say, “Give us a large amount of money and we’ll do the work for you”, sort of thing. That is the problem.

**Mr O’Sullivan:** The example in Germany that it is a good ecosystem is that it is lowering the cost of businesses accessing research and vice versa, so there are some lessons in that. But one of the first things we can do is try and make more information available and educate people around who is there to support them, because at the moment a lot of people would not know.

**Mr T.K. WALDRON:** Lindsay, we were in Victoria. Are you aware that the government over there is, as I understand it, doing a similar thing and actually mapping all the businesses, which I thought was pretty good?

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**Mr O'Sullivan:** We are not aware of it, so if you have some information and you are happy to share with us, we would like to go and have a chat to them.

**The CHAIR:** It is confidential, is it not?

**Mr T.K. WALDRON:** Is it?

**The CHAIR:** They got Boston Consulting Group to do it.

**Mr T.K. WALDRON:** Right, I am sorry.

[11.00 am]

**Mr F.M. LOGAN:** I read in your submissions a statement that, well, excited me anyway, but I am just trying to find out a little bit more about it from you guys; that is, “without doubt, there is a bright future for the WA manufacturing industry”, which from my background is a very exciting statement. What I would like to know from you guys is a couple of things. You go on to talk about the extent of the advanced manufacturing in Western Australia, which I would like you to sort of espouse on and draw my attention to, because whilst there are clearly innovative manufacturers in Western Australia in advanced manufacturing, they are very, very small and there are very few of them, and I certainly would not include the beverage products in that area, not unless, of course, we are talking about Gatorades and others being innovative in producing different types of beer, which I just do not put in the advanced manufacturing category. If you could enlighten the committee on that; and, also, what is your view, and what would the CCI do, if a government of Western Australia was to call in the CSIRO to actually establish an offshoot or an arm of the centre of advanced manufacturing of the CSIRO here in Western Australia to actually underpin the sort of statements that you are making about a bright future for advanced manufacturing. Because, they have certainly put a lot of money into advanced manufacturing in the CSIRO, but none of it is in WA.

**Mr Leggett:** Manufacturing: we have obviously got a lot of members in that environment and I cannot recall any of them that come to mind that are in advanced manufacturing, but we have released a vision paper on advanced manufacturing that I am happy to provide to the committee, which would provide that detail for you. I guess what we were alluding to in the submission is the research and development that the advanced manufacturing industry provides and benefits that that has to the community and to the nation as a whole. I guess if we look across the sector as a whole and you look at the multipliers that you expect to get around certain industries—if we look at tourism it is 1.9 to one, retail trade 1.7, mining 1.6, and the best we have got is agriculture at 2.1 to one. If we look at benefits we get out of the R&D tax incentive which manufacturers utilise; we are up to 11 to one. As we point out in our submission, we get quite a lot of bang for our buck in return from a very limited amount of forgone tax; and utilising this tax credit, we get a \$16.8 billion outcome. I guess, from our perspective, with regard to the CSIRO, we would be very happy to see that sort of innovative approach come across to the state here underpinning what the industry wants—small business, big business, medium business—and is trying to do.

**Mr O'Sullivan:** I will say that a good percentage of our members are manufacturers; it depends on what your definition of manufacturing is and what it means and how it relates to innovation—it is not just about invention. So, manufacturers, in order to be able to survive in this market, which is a very small domestic market and relatively or comparatively high costs, they have to find ways of doing things differently. So, that can be around just process innovation. So when we had recently done a survey of our members, if you look at by industry, manufacturing consider themselves more innovative than any other industry in responses that we have had, and also the smallest number of responses who said they were not innovative. So, I think they consider themselves quite innovative. That is one of the things, initially, the idea was that we may or may not test over time and rather than on focusing on what a definition of innovation is, maybe there is a hypothesis that says that in order to be innovative you have got to have a mindset to be innovative. So, you have to consider

yourself to be innovative in the first place in order to then do the things you need to do to create new ideas, develop them and commercialise them. It might be an interesting piece of work to really understand what is the perception of innovation within different industries and within government and maybe is there a correlation between that and innovative output and commercial gain.

**Mr F.M. LOGAN:** Lindsay, given the CCI's statements on advanced manufacturing, do you see a role for the state government to play? I mean, obviously the R&D space is the federal responsibility—the R&D tax incentives are a federal responsibility. What role do you see the state government playing in that space?

**Mr O'Sullivan:** Look, I do not know whether there are things that are unique to advanced manufacturing that the state government can do. I think there are some things that will apply that advanced manufacturing is likely to benefit from, maybe more than other industries, but the issues are the same. So if you look at what does advanced manufacturing need, it needs good R&D, so it needs good connections with researchers or doing research itself and connections to commercialise it. It also needs people with the right skills, so our training policy, where we want to focus our limited—I mean, I sit on the State Training Board, so I see this all the time as well. We have got limited funds and a very complicated training system. The signals that the government sends around, "This is the support we can provide by making sure that we are focusing on the right types of skill sets that industry require", and advanced manufacturing requires an increasingly higher level. In fact, all industries in Western Australia will benefit from higher level skills over the longer term.

**Mr Leggett:** Can I just add one thing in there? I was just going to say also that with regards to the survey that we have undertaken, the second highest problem that came back to us was interaction with competitors. So when it comes to something the government could actually do to assist manufacturers, it would be like in the shipbuilding industry where we have a group of manufacturers over here who are trying to get federal work or trying to get workout of a government, and to basically enable that collaboration to occur and put forward those ideas.

**Mr O'Sullivan:** That is a great example.

**The CHAIR:** I did have a question. We were talking about your mapping of the ecosystem, and we were wondering whether you were looking, as a part of that, at the Technology Park at Bentley, and the way the Department of Commerce is involved with that.

**Mr O'Sullivan:** Yes, so we have had a number of conversations with the Department of Commerce over the last 12 months as part of this process of looking at our thinking. I think government can play a role through organisations for facilities that can encourage people coming together. We are not convinced that the innovation centre, which is out at Technology Park, is the right mechanism to do that. It is something the private sector can do, so there is support the government might provide in bringing people to that and themselves into that ecosystem; more subsets of it, I think, is an alternative way. Certainly in the innovation map the innovation centre will sit within that as one of the current facilities. My understanding is that funding for the innovation centre is likely to end at some point, so either it closes, funding is provided or an alternative is considered that involves the private sector being involved in taking the functions of that forward. I think there are other things that partly relate to that, such as celebrating and recognising innovations is a role government can play a role in. The innovation awards is a way of trying to tell stories, and they do help, I think.

**The CHAIR:** We have run out of time, so I would just like to read my closing statement.

I would like to thank you for your evidence before the committee today. A transcript of this hearing will be forwarded to you for correction of minor errors. Any such corrections must be made and the transcript returned within 10 days from the date of the letter attached to the transcript. If the transcript is not returned within this period it will be deemed to be correct. New material cannot be

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added via these corrections, and the sense of your evidence cannot be altered. Should you wish to provide additional information or elaborate on particular points, please include a supplementary submission for the committee's consideration when you return your corrected transcript of evidence. I think you were going to send us a report, weren't you? Yes. We will look forward to seeing that. With that, thank you very much for your evidence.

**Hearing concluded at 11.09 am**

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